ABSTRACT OF THE DISCLOSURE

A cooling system with refrigerant for air conditioning and engine parts, comprising: a compressor, a high pressure circuit filled with the refrigerant; and a low pressure circuit filled with the refrigerant too. The high pressure circuit further comprises a condenser, the low pressure circuit further comprises an evaporator and a heat exchanger, the heat exchanger at an interior thereof is provided with a refrigerant passage and a fluid passage, which enters the engine, with the two passages next to each other and contacting with each other and at an exterior thereof includes a refrigerant inlet, a refrigerant outlet, a fluid entrance to the engine and a fluid exit from the engine. Once the compressor is in a state of running, the refrigerant in the low pressure circuit passes through the evaporator and enters the refrigerant passage in the engine via a connecting pipe in the low pressure circuit and the refrigerant inlet and then flows out from the heat exchanger via the refrigerant outlet; a fluid for being cooled flows into the fluid passage via the fluid entrance and flows out from the fluid exit before reaching an engine body; and temperature of the fluid during entering fluid passage is higher than the refrigerant in the refrigerant passage and heat in the fluid transmits the refrigerant between a wall of the fluid passage and a wall of the refrigerant passage.